



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,868	06/02/2004	Otis L. Nelson JR.	200405PM	3867
23688	7590	04/05/2007		
Bruce E. Harang PO BOX 872735 VANCOUVER, WA 98687-2735			EXAMINER KRISHNAN, MALINI	
			ART UNIT	PAPER NUMBER
			1714	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/709,868

Applicant(s)

NELSON ET AL.

Examiner

Malini Krishnan

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/02/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4-8, and 12-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims recite the limitation "the base fuel". There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 103

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-16 are rejected under U.S.C. 103(a) as being unpatentable over Nelson ('723) in view of Demirbas (Current Advances in Alternative Motor Fuels).

Nelson discloses a motor fuel additive composition comprising (a) a fuel conditioner component and (b) a detergent component. The fuel conditioner (a) comprises (i) from 2 to 50 percent by weight of a polar oxygenated hydrocarbon

Art Unit: 1714

compound and (ii) from about 2 to about 50 percent by weight of an oxygenated compatibilizing agent. The detergent component (b) is selected from the group consisting of (i) a reaction product of a substituted hydrocarbon (A) and an amino compound (B), and (ii) a polybutylamine or polyisobutylamine (see abstract). The polar oxygenated hydrocarbon has an average molecular weight of from about 200 to about 500, and acid number of about 25 to 175, and a saponification number of about 75 to about 200 (col. 7, lines 11-33). The oxygenated compatibilizing agent has a solubility parameter of from about 7.0 to about 14.0 and moderate to strong hydrogen-bonding capacity (col. 7, lines 53-62). The hydrocarbon compound (A) of the detergent component is a substituted hydrocarbon of the formula R_1-X wherein R_1 is a hydrocarbyl radical having a molecular weight in the range of about 150 to 10,000 and X is selected from the group consisting of halogens, succinic anhydride and succinic dibasic acid (col. 4, lines 52-65). The amino compound (B) is of the formula $H-(NH-(A)_m)_n-Y-R_2$ wherein Y, A, m, n, and R_2 are identical to those in the instant claim 8 (col. 5, lines 1-21). The polybutylamine or polyisobutylamine is identical to that in instant claim 8 (col. 6, lines 30-46). Further, the composition includes other additives such as methyl tertiary butyl ether (MTBE) and ethyl tertiary butyl ether (ETBE), alcohols such as methanol or ethanol, and additives that are "typically employed in motor fuels" such as a common anti-knock additive, tetraethyl lead (col. 9, lines 56-60). Nelson also discloses examples wherein the additive composition was added to a base fuel in amounts between 40 ppm and 1000 ppm (col. 10, lines 44-50; col. 11, lines 14-20).

Nelson does not disclose: (i) the composition as specifically a biodiesel fuel additive composition, and (ii) the addition of the composition as simultaneously, before, or after addition of the other additives, and (iii) an amount of from about 2% to about 100%, and up to 50% by volume of additive composition in biodiesel.

With respect to (i) above, it is the examiner's position that biodiesel is a type of motor fuel, so that the disclosed motor fuel additive composition of Nelson would generically read on a biodiesel fuel additive composition. Attention is drawn to Demirbas, which discloses alternative motor fuels, in which biodiesel is listed as one (see abstract).

Therefore, while Nelson is silent with respect to specifically biodiesel fuel, the generic usage of motor fuel encompasses biodiesel, and it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to utilize the composition of Nelson in a biodiesel fuel as disclosed by Demirbas.

With respect to (ii) above, regarding claims 6-8 and 12-14, although Nelson and Demirbas do not disclose addition of additive to a base fuel simultaneously, after or before any other additives, it is noted that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process", *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Further, "although produced by a different process, the burden shifts

Art Unit: 1714

to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product”, *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). See MPEP 2113.

Therefore, absent evidence of criticality regarding the presently claimed addition of additive to a base fuel simultaneously, after or before any other additives and given that Nelson and Demirbas meet the requirements of the claimed composition, Nelson and Demirbas clearly meet the requirements of present claims 6-8 and 12-14.

With respect to (iii) above, regarding claims 2-3 and 10-11, it is the examiner's position that the amount of additive composition is a result effective variable because changing it will clearly affect the type of product obtained. See MPEP § 2144.05 (B). Case law holds that “discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art.” See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

In view of this, it would have been obvious to one of ordinary skill in the art to utilize amounts of additive composition including those within the scope of the present claims, so as to produce desired end results. Because of the effects of the detergent and conditioner components of the additive, the amount utilized in Nelson and Demirbas would be chosen accordingly in order to produce the desired biodiesel fuel with such properties.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. 6719815, 6379530, 6361573.

Art Unit: 1714

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Malini Krishnan whose telephone number is 571-272-6519. The examiner can normally be reached on Monday through Friday, 8:00 am - 5:00 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Malini Krishnan



Vasu Jagannathan
VASU JAGANNATHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700